

A method of forming a preform which has a glass core surrounded by an outer glass cladding with a coating of a light interactive material disposed between the core and cladding. The method includes providing a glass core having a viscosity which lies within a given preselected temperature range, followed by forming a substantially homogeneous coating of a light interactive material over the surface of the core, with the coating material having a viscosity which is equal to or less than the viscosity of the glass core. A glass cladding is formed over the coated layer, with the cladding glass having a viscosity which overlaps the viscosity of the core glass and a thermal coefficient of expansion compatible with that of the core. The light interactive material is an inorganic material which includes a metal, metal alloy, ferrite, magnetic material and a semiconductor.